EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Otilia Gabor,Reg.No. 60217 on December 1, 2009.

The application has been amended as follows:

ABSTRACT

A method and device for deploying a distributed monitoring of a computer system having a plurality of resources forming at least one monitored domain. The method includes specifying for each indicator to be deployed, the domain or domains of the computer system in which each indicator should be deployed and deploying the specified configuration using a configuration deployment agent that creates, for each resource to be monitored, a configuration agent to handle the creation of the indicators.

IN THE CLAIMS:

Claims 1-25. (Cancelled)

26. (Currently Amended) A deployment device comprising:

a computer configured to deploy a distributed monitoring of a computer system having a plurality of resources to be monitored by said deployment device, wherein said resources form a monitored domain, said deployment device including a computer readable storage medium upon which is encoded a sequence of instructions, which when executed by the computer, cause the deployment device to establish distributed monitoring of the computer system;

a plurality of indicator agents stored on a computer readable storage medium each configured to evaluate an indicator comprising a value characterizing a status or an operation of one or more resources of the computer system and an indicator-defining function for determining said value by searching through object identifiers, instantiating associated variables using a network management protocol, and unifying the object identifiers using a unifiability criteria;

a configuration module encoded with a sequence of instructions to specify one or more domains of the computer system in which each said indicator agent is to be deployed, the configuration module comprising a configuration deployment agent that creates a configuration agent for creating the plurality of indicator agents for the resource, and each indicator agent evaluates one of the plurality of indicators and manages an associated subscriber list; and

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writing modules associated with each indicator agent, and encoded with a sequence of instructions to write in the associated subscriber list, upon receiving a subscription notification from at least one other indicator agent, an identification and management information of said at least one other indicator agent, and the subscriber list being managed by the associated indicator agent and stored using storage means of the resource associated with the indicator agent.

27. (Previously Presented) A deployment device according to claim 26, wherein each configuration agent comprises means which creates an indicator agent for each indicator of the resource to which said indicator is assigned, said indicator agent being an indicator deployment agent which determines, for the indicator with which said deployment agent is associated, various combinations of the values of the variables used by the function from which said indicator is determined .

28. (Previously Presented) A deployment device according to claim 27, further comprising an indicator compiler that generates, for each indicator, after analyzing the function from which said indicator is determined , at least two different object classes comprising:

a first object class "I_Deployer" associated with the indicator deployment agents that deploys instances of a second object class "I_Indicator"; and

the second object class “I_Indicator” associated with the indicator agents that evaluates the indicator, said second object class “I_Indicator” being configured to identify indicator agents;

wherein the first class object “I_Deployer” is configured to specify which indicator agents identified by the second object class “I_Indicator” must be created and to declare to a naming service the indicator agents actually created.

29. (Previously Presented) A deployment device according to claim 26, wherein the indicator agent comprises name resolution means which resolves names of objects referenced in the function from which the indicator is determined ; and

means which creates corresponding indicator agents by determining valid combinations of the values of the variables of said objects determined by the name resolution means.

30. (Previously Presented) A deployment device according to claim 27, wherein the indicator deployment agent comprises name resolution means which resolves names of objects referenced in the function from which the indicator is determined ; and

means which creates corresponding indicator agents by determining valid combinations of the values of the variables of said objects determined by the name resolution means.

31. (Previously Presented) A deployment device according to claim 29, wherein the name resolution means comprises search means which searches for all objects identified in the function from which the indicator is determined , the search means comprising:

means which verifies, for a referenced object, whether a constraint expressed in the values of the variables is satisfied; and

means which creates the indicator agent associated with the indicator deployment agent if the constraint is satisfied, using as parameters the objects corresponding to the valid combinations of the values of the variables found.

32. (Previously Presented) A deployment device according to claim 27, wherein the configuration deployment agents and the configuration agents are managed by at least one agent machine installed in at least one resource of the monitored domain, the at least one agent machine being configured to handle the distribution of one or more subscription notifications and the transmission of the subscription notifications and the management of overall indicator agent atomicity.

33. (Previously Presented) A deployment device according to claim 28, wherein the configuration deployment agents and the configuration agents are managed by at least one agent machine installed in at least one resource of the monitored domain, the at least one agent machine being configured to handle the distribution of one or

more subscription notifications and the transmission of the subscription notifications and the management of overall indicator agent atomicity.

34. (Previously Presented) A deployment device according to claim 27, further comprising means which manages each indicator deployment agent either by the agent machine that manages the configuration agent associated with the indicator deployment agent, or by a different agent machine, the at least one agent machine being configured to handle the distribution of one or more subscription notifications and the transmission of the subscription notifications and the management of overall indicator agent atomicity.

35. (Previously Presented) A deployment device according to claim 28, further comprising means which manages each indicator deployment agent either by the agent machine that manages the configuration agent associated with the indicator deployment agent, or by a different agent machine, the at least one agent machine being configured to handle the distribution of one or more subscription notifications and the transmission of the subscription notifications and the management of overall indicator agent atomicity.

36. (Currently Amended) A method for deploying a distributed monitoring of a computer system having a plurality of resources to be monitored by a deployment device included in the computer system, the deployment device including a

computer readable storage medium upon which is encoded a sequence of instructions, which when executed by the computer, causes the deployment device to establish distributed monitoring of the computer system, the method comprising:

evaluating, using a plurality of indicator agents stored on a computer readable storage medium, an indicator comprising a value characterizing a status or an operation of one or more resources of the computer system and an indicator-defining function for determining said value by searching through object identifiers, instantiating associated variables using a network management protocol, and unifying the object identifiers using a unifiability criteria;

specifying, using a configuration module encoded with a sequence of instructions, one or more domains of the computer system in which each said indicator agent is to be deployed, the configuration module comprising a configuration deployment agent that creates a configuration agent for creating the plurality of indicator agents for the resource, wherein each indicator agent evaluates one of the plurality of indicators and manages an associated subscriber list; and

writing, using a writing module associated with each indicator agent and encoded with a sequence of instructions, in the associated subscriber list, upon receiving a subscription notification from at least one other indicator agent, an identification and management information of said at least one other indicator agent, wherein the subscriber list is being managed by the associated indicator agent and stored using storage means of the resource associated with the indicator agent.

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37. (Previously Presented) The method according to claim 36, further comprising creating an indicator agent for each indicator of the resource to which said indicator is assigned, said indicator agent being an indicator deployment agent, and determining, using said indicator deployment agent, for the indicator with which said deployment agent is associated, various combinations of the values of the variables used in the function from which said indicator is determined.

38. (Previously Presented) The method according to claim 37, further comprising generating, for each indicator, after analyzing the function from which said indicator is determined, at least two different object classes comprising:

a first object class "I_Deployer" associated with the indicator deployment agents that deploys instances of a second object class "I_Indicator"; and

the second object class “I_Indicator” associated with the indicator agents that evaluates the indicator, said second object class “I_Indicator” being configured to identify indicator agents;

wherein the first class object “I_Deployer” is configured to specify which indicator agents identified by the second object class “I_Indicator” must be created and to declare to a naming service the indicator agents actually created.

39. (Previously Presented) The method according to claim 36, further comprising resolving, using name resolution means, names of objects referenced in the function from which the indicator is determined, and creating corresponding indicator agents

by determining valid combinations of the values of the variables of said objects determined by the name resolution means.

40. (Previously Presented) The method according to claim 37, further comprising resolving, using name resolution means, names of objects referenced in the function from which the indicator is determined, and creating corresponding indicator agents by determining valid combinations of the values of the variables of said objects determined by the name resolution means.

41. (Previously Presented) The method according to claim 39, further comprising:

searching for all objects identified in the function from which the indicator is determined;

verifying, for a referenced object, whether a constraint expressed in the values of the variables is satisfied; and

creating the indicator agent associated with the indicator deployment agent if the constraint is satisfied, using as parameters the objects corresponding to the valid combinations of the values of the variables found.

42. (Previously Presented) The method according to claim 37, further comprising managing the configuration deployment agents and the configuration agents by at least one agent machine installed in at least one resource of the monitored domain, the at least one agent machine being configured to handle the distribution of one or

more subscription notifications and the transmission of the subscription notifications and the management of overall indicator agent atomicity.

43. (Previously Presented) The method according to claim 38, further comprising managing the configuration deployment agents and the configuration agents by at least one agent machine installed in at least one resource of the monitored domain, the at least one agent machine being configured to handle the distribution of one or more subscription notifications and the transmission of the subscription notifications and the management of overall indicator agent atomicity.

44. (Previously Presented) The method according to claim 37, further comprising managing each indicator deployment agent either by the agent machine that manages the configuration agent associated with the indicator deployment agent, or by at least one different agent machine, the at least one agent machine being configured to handle the distribution of one or more subscription notifications and the transmission of the subscription notifications and the management of overall indicator agent atomicity.

45. (Previously Presented) The method according to claim 38, further comprising managing each indicator deployment agent either by the agent machine that manages the configuration agent associated with the indicator deployment agent, or by at least one different agent machine, the at least one agent machine being

configured to handle the distribution of one or more subscription notifications and the transmission of the subscription notifications and the management of overall indicator agent atomicity.

Allowable Subject Matter

Claims 26-45 are allowed.

The following is an examiner's statement of reasons for allowance:

The provision for --- *a method and device for distributed monitoring comprising a computer configured to deploy a distributed monitoring of a computer system having a plurality of resources to be monitored by said deployment device, wherein said resources form a monitored domain, said deployment device including a computer readable storage medium upon which is encoded a sequence of instructions, which when executed by the computer, cause the deployment device to establish distributed monitoring of the computer system; and*

a plurality of indicator agents stored on a computer readable storage medium each configured to evaluate an indicator comprising a value characterizing a status or an operation of one or more resources of the computer system and an indicator-defining function for determining said value by searching through object identifiers, instantiating

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associated variables using a network management protocol, and unifying the object identifiers using a unifiability criteria;

a configuration module encoded with a sequence of instructions to specify one or more domains of the computer system in which each said indicator agent is to be deployed, the configuration module, comprising a configuration deployment agent that creates a configuration agent for creating the plurality of indicator agents for the resource, and each indicator agent evaluates one of the plurality of indicators and manages an associated subscriber list; and

writing modules associated with each indicator agent, and encoded with a sequence of instructions to write in the associated subscriber list, upon receiving a subscription notification from at least one other indicator agent, an identification and management information of said at least one other indicator agent, and the subscriber list being managed by the associated indicator agent and stored using storage means of the resource associated with the indicator agent

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--- wherein all the features previously described are combined in one singular embodiment, is not fairly taught or suggested by the prior art of record.

The Examiner interprets the computer readable storage medium as described in Applicant Specifications Page 8 Lines 10 and thus concludes that said storage medium is comprising of statutory subject matter.

The Examiner finds particular novelty in the method and deployment device for the deployment of distributed monitoring agents for distributed monitoring of a computer

system having a plurality of resources to be monitored by said deployment device, where said resources form a monitored domain, said method deploying a plurality of indicator agents each configured to evaluate an indicator comprising a value characterizing a status or an operation of one or more resources of the computer system and an indicator-defining function for determining said value by searching through object identifiers, instantiating associated variables using a network management protocol, *and unifying the object identifiers using a unifiability criteria* (as described in the Applicant Specification page 20) further comprising creating the plurality of indicator agents for the resource, wherein each indicator agent evaluates one of the plurality of indicators and *manages an associated subscriber list*; (Page 10 Lines 10-15) and writing, using writing means associated with each indicator agent, in the associated subscriber list, upon receiving a subscription notification (page 10 Lines 15-25) from at least one other indicator agent, an identification and management information of said at least one other indicator agent, wherein the subscriber list is being managed by the associated indicator agent and stored using storage means of the resource associated with the indicator agent.

The Examiner finds particular novelty in the identifier unification process using the unifiability critieria which makes it possible both to verify that two identifiers are unifiable and to determine for which values of the variables that are still free prior to the start of the unification process.

Anerousis disclosed wherein management information relating to a network is automatically aggregated by computational means in the form of a attribute name-value pair which is stored in an Aggregation Managed Object (AMO). Each AMO contains a list of attributes which corresponds to network management information aggregated according to the aggregation rule. However Anerousis does not disclose deploying a plurality of indicator agents each configured to evaluate an indicator comprising a value characterizing a status or an operation of one or more resources of the computer system and an indicator-defining function for determining said value by searching through object identifiers, instantiating associated variables using a network management protocol, *and unifying the object identifiers using a unifiability criteria.* Anerousis does not disclose creating the plurality of indicator agents for the resource, wherein each indicator agent evaluates one of the plurality of indicators and *manages an associated subscriber list*; and writing, using writing means associated with each indicator agent, in the associated subscriber list, upon receiving a subscription notification from at least one other indicator agent, an identification and management information of said at least one other indicator agent, wherein the subscriber list is being managed by the associated indicator agent and stored using storage means of the resource associated with the indicator agent.

Jung disclosed associating a set of one or more "cells" with a set of given computing resources that comprise the master resource. Each cell preferably is associated with a respective one of the set of given computing resources and has a set of one or more attributes whose values collectively define a "state" of the cell.

Whenever a change in an attribute of a given cell effects a change in that cell's state, the attribute change is propagated across each cell directly impacted by the cell state change, as well as to those observing cells that may be indirectly affected. However Jung did not disclose deploying a plurality of indicator agents each configured to evaluate an indicator comprising a value characterizing a status or an operation of one or more resources of the computer system and an indicator-defining function for determining said value by searching through object identifiers, instantiating associated variables using a network management protocol, *and unifying the object identifiers using a unifiability criteria.*

Turek disclosed wherein a software agent is selected and then deployed into the computer network to diagnose the network fault condition. If the location of the fault is indeterminate, the software agent migrates to the location by gathering information about the fault as it traverses the network. However Turek did not disclose deploying a plurality of indicator agents each configured to evaluate an indicator comprising a value characterizing a status or an operation of one or more resources of the computer system and an indicator-defining function for determining said value by searching through object identifiers, instantiating associated variables using a network management protocol, *and unifying the object identifiers using a unifiability criteria.*

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREG BENGZON whose telephone number is (571)272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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